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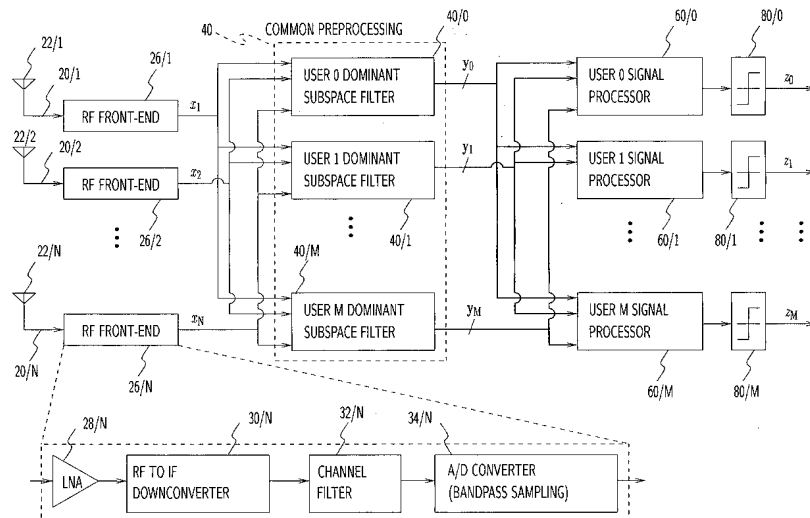
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#### Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,

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(54) Title: MULTI-USER ADAPTIVE ARRAY RECEIVER AND METHOD



(57) **Abstract:** An array receiver which reduces complexity and cost by exploiting multiuser information in signals received from a plurality of transmitting users preprocesses (40) samples of antenna signals ( $x_1, x_2, \dots, x_N$ ) from the antenna elements (22/1, ..., 22/N) to form basis signals ( $y_0, \dots, y_M$ ) together having fewer space-time dimensions than the space-time dimensions of the combined antenna signals. The receiver processes and combines the basis signals to produce sets of estimated received signals ( $z_0, \dots, z_M$ ), each for a corresponding one of the users. Each of the basis signals comprises a different combination of the antenna signals. The receiver combines the basis signals to provide a user-specific output signal, and periodically updates parameters of the filters (40/0, ..., 40/M) used for deriving each particular basis signal such that each user-specific output signal will exhibit a desired optimized concentration of energy of that user's received signal as received by the array antenna.

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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ,

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